

## **REMARKS**

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1-4, 6, 8 and 16-33 are pending.

Claims 1-2, 4, 8 and 16 stand rejected under 35 U.S.C. §102(b) as being anticipated by Sherif; claims 1-5, 8-11, 13-14 and 16 stand rejected under 35 U.S.C. §102(b) as being anticipated by Johnson; claims 1, 4, 5, 8, 9 and 16 stand rejected under 35 U.S.C. §102(e) as being anticipated by Tsao; and claims 1-5, 8-11, 13-14 and 16 stand rejected under 35 U.S.C. §102(e) as being anticipated by Caletka. Independent claim 1 has been amended to include limitations similar to those recited in claims 12 and 15. As claims 12 and 15 were not rejected in any of the above stated art grounds of rejection, it is clear that this amendment to claim 1 has rendered these art grounds of rejection moot. As such, Applicants respectfully request that the Examiner withdraw these art grounds of rejection.

Claims 12 and 15 stand rejected under 35 U.S.C. §102(e) as being anticipated by, or, in the alternative, under 35 U.S.C. §103 as being obvious over Caletka. On page 8 of the Office Action, the Examiner actually states the rejection as claims 12 and 16, but it is clear from reading the Examiner's art grounds of rejection that the Examiner meant to list claims 12 and 15 in this rejection. Applicants respectfully traverse this art grounds of rejection.

In asserting that claim 12 reads on the Caletka patent, the Examiner interprets the previously recited limitation of a "dovetail groove" as broadly meaning a joint formed by interlocking tenons and mortises. By this amendment, Applicants have eliminated the use of the terminology "dovetail groove" and more clearly and explicitly recited the groove formed in the protective cap. Specifically, claim 1 now recites that the portion of the protective cap extending beyond an edge of the semiconductor chip includes a groove having "a fan-shaped cross-section such that a part of the groove further from the second side of the semiconductor chip is wider in cross-section than a part of the groove closer to the second side of the semiconductor chip."

As indicated by the Examiner, the Caletka patent discloses forming a hole having a circular, diamond or hexagonal shape. However, Caletka does not disclose or suggest the fan-shaped groove as recited in claim 1.

The Examiner then contends that diamond or hexagonal shaped grooves are functionally equivalent to the claimed groove. Applicants respectfully submit that this is incorrect. First, the shapes of the holes disclosed by Caletka, round, diamond or hexagonal, are the shapes viewed when looking down upon the semiconductor chip from the top, and not from the side. As such, none of these shapes can provide a fan-shaped cross-section where a part of the groove further from the second side of the semiconductor chip is wider in cross-section than a part of the groove closer to the second side of the semiconductor chip, as recited in claim 1. Because, as further recited in claim

1, a molding resin is formed which fills the fan-shaped groove, a significantly greater bonding of the protective cap to the semiconductor chip and circuit substrate is obtained by the use of the fan-shaped groove as claimed as opposed to the holes of Caletka. Therefore, the protective cap having a groove as recited in claim 1 is not anticipated nor rendered obvious to one skilled in the art by Caletka.

Claims 2-4, 8, 16 and 31-33, dependent upon claim 1, are patentable for the reasons stated above with respect to claim 1 as well as on their own merits.

Applicants respectfully request that the Examiner withdraw this art grounds of rejection.

Having demonstrated that independent claim 1, which is also generic, is allowable, Applicants respectfully request that the Examiner rejoin and allow claim 6.

### **CONCLUSION**

In view of above remarks, reconsideration of the outstanding rejection and allowance of the pending claims is respectfully requested.

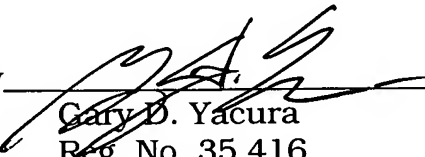
If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit

Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16  
or 1.17; particularly, extension of time fees.

Respectfully submitted,

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